

## REMARKS

Claims 1, 10-19, 24, 28, 37, 48, and 58 are amended. Claim 9 is cancelled. Claims 1-8, and 10-60 remain in the application for consideration. In view of the following remarks, Applicant respectfully requests withdrawal of the rejections.

### Abstract

The Abstract has been objected to for language and format considerations. Specifically, the Office has indicated that the Abstract is too long and that the language is not clear and concise. Applicant submits herewith a new Abstract thus overcoming the Office's objections.

### §103 Rejections

Claims 1-19, 24-28, 30-31, 37-43, 48-49, and 58-60 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,953,722 to Lampert et al. (hereinafter "Lampert"). In addition, claims 20-23, 29, 32-36, 44-47 and 50-57 stand rejected under §103(a) as obvious over Lampert in view of U.S. Patent No. 6,151,601 to Papierniak.

**Claim 1** recites a system for determining context. The recited system comprises one or more computer-readable media and a hierarchical tree structure resident on the media. The tree structure is recited to comprise multiple nodes each of which represent geographical divisions of the Earth. This claim has been amended to clarify that the individual nodes comprise *an entity identification (EID) that is unique to the node, and that the EIDs serve as a basis by which attributes can be assigned to goods or services associated with an individual*

1 *node*. Support for this amendment, as well as a discussion of an exemplary  
2 implementation, can be found in the specification on page 20, lines 3-25.

3       Lampert neither discloses nor suggests any such subject matter. Rather,  
4 Lampert discloses a system and method for making and using a geographic  
5 database. Lampert's geographic database represents a geographic region and is  
6 used with a navigation application program. The geographic database includes  
7 data entities each of which represents a physical feature in the geographic region.  
8 The data entities are separated into parcels each of which contains a grouping of  
9 data entities that represent features in the geographic area encompassed within a  
10 separate one of a plurality of rectangles which together encompass all the features  
11 in the entire geographic region represented by all of the plurality of data entities.  
12 Each of the plurality of data entities has a data entity ID. The data entities  
13 contained in each of the plurality of parcels define an associated range of data  
14 entity ID's associated with their respective parcel such that the range of data entity  
15 ID's associated with each parcel does not overlap the range of data entity ID's  
16 associated with any another of the plurality of parcels.

17       Associated with the geographic database is a searchable kd-tree structure  
18 whose nodes represent divisions of the geographic region into the rectangles from  
19 which the parcels are formed. The kd-tree structure permits spatial searching for a  
20 parcel based upon geographic coordinates. The kd-tree also includes data at certain  
21 of its nodes that identify the ranges of data entity ID's included in parcels formed  
22 from rectangles resulting from the divisions thereby enabling the kd-tree to be  
23 used as a binary tree for performing searches using the data entity ID's. Navigation  
24 application program functions can search for data by utilizing the kd-tree to  
25

1 conduct either a spatial search using geographic coordinates or a binary search  
2 using a data entity ID.

3 Nowhere does Lampert disclose or suggest a system in which *individual*  
4 *nodes comprise an entity identification (EID) that is unique to the node, and*  
5 *that the EIDs serve as a basis by which attributes can be assigned to goods or*  
6 *services associated with an individual node.* Accordingly, this claim is allowable.

7 **Claims 2-8, and 10-23** depend from claim 1 and are allowable as  
8 depending from an allowable base claim. These claims are also allowable for their  
9 own recited features which, in combination with those recited in claim 1, are  
10 neither disclosed nor suggested in the references of record, either singly or in  
11 combination with one another.

12 **Claim 9** has been cancelled because aspects of its subject matter have been  
13 incorporated into claim 1. As a result, claims 10-19 which were previously  
14 dependent from claim 9 have been amended to change their dependencies.

15 In making out the rejection of claims 20-23 that rely on the combination  
16 with Papierniak, the Office argues that Papierniak discloses “business context,  
17 wireless/mobile and Internet” and cites to various sections of Papierniak. (See  
18 Office Action page 10, paragraph 5). Based on this disclosure, the Office  
19 concludes that the subject matter of claims 20-23 would be obvious. Applicant  
20 respectfully but strongly disagrees. First, these claims are allowable as depending  
21 from an allowable base claim. Papierniak is not seen to add anything of  
22 significance to these already-allowable claims. Second, Applicant has reviewed  
23 Papierniak and fails to see how this reference is relevant to the subject matter of  
24 the rejected claims. Applicant respectfully submits that the Office’s §103 is  
25

1 improper and must be withdrawn for reasons not the least of which is that the  
2 rejection does not rise to the level of a prima facie case of obviousness.

3 **Claim 24** recites a system for determining context. The recited system  
4 comprises one or more computer-readable media, a first hierarchical tree structure  
5 having multiple nodes associated with a first context, and at least one second  
6 hierarchical tree structure having multiple nodes associated with a second context.  
7 Further, at least one node from the second hierarchical tree structure is recited to  
8 be linked with one node on the first hierarchical tree structure by a link that is  
9 configured to enable a complete context to be derived from the first and second  
10 contexts. The claim has been amended to clarify that *individual nodes have*  
11 *unique IDs that can serve as a basis by which attributes can be assigned to*  
12 *goods or services*. Nowhere does Lampert disclose or suggest any such subject  
13 matter. Accordingly, this claim is allowable.

14 **Claims 25-36** depend from claim 24 and are allowable as depending from  
15 an allowable base claim. These claims are also allowable for their own recited  
16 features which, in combination with those recited in claim 24, are neither disclosed  
17 nor suggested in the references of record, either singly or in combination with one  
18 another.

19 In addition, the claims rejected over the combination with Papierniak (i.e.  
20 claims 29, and 32-36) are allowable for all of the reasons set forth above.

21 **Claim 37** recites a method of determining context and comprises the acts of  
22 accessing first and one or more second hierarchical tree structures that are resident  
23 on one or more computer-readable media, each tree structure having multiple  
24 nodes, the nodes of the first hierarchical tree structure being associated with a first  
25 context, the nodes of the one or more second hierarchical tree structures being

1 associated with a second context. Additionally, the recited acts comprise  
2 traversing multiple nodes of at least one of the tree structures to derive a context.  
3 In addition, this claim has been amended to recite that *individual nodes have*  
4 *unique IDs that can serve as a basis by which attributes can be assigned to*  
5 *goods or services*. Lampert neither discloses nor suggests any such subject matter.  
6 Accordingly, this claim is allowable.

7       **Claims 38-47** depend from claim 37 and are allowable as depending from  
8 an allowable base claim. These claims are also allowable for their own recited  
9 features which, in combination with those recited in claim 37, are neither disclosed  
10 nor suggested in the references of record, either singly or in combination with one  
11 another.

12       In addition, the claims rejected over the combination with Papierniak (i.e.  
13 claims 44-47) are allowable for all of the reasons set forth above.

14       **Claim 48** is directed to a computer-readable medium having instructions  
15 that cause a computing device to perform as recited. This claim has been amended  
16 to clarify that the *individual nodes have unique IDs that can serve as a basis by*  
17 *which attributes can be assigned to goods or services*. Lampert neither discloses  
18 nor suggests any such subject matter. Accordingly, this claim is allowable.

19       **Claims 49-53** depend from claim 48 and are allowable as depending from  
20 an allowable base claim. These claims are also allowable for their own recited  
21 features which, in combination with those recited in claim 48, are neither disclosed  
22 nor suggested in the references of record, either singly or in combination with one  
23 another.

24       In addition, the claims rejected over the combination with Papierniak (i.e.  
25 claims 50-53) are allowable for all of the reasons set forth above.

1       **Claim 54** recites a method of locating goods or services and comprises the  
2 acts of:

3               defining a hierarchical tree structure comprising multiple nodes that  
4               each can define a *physical or logical entity*;

- 5               • *associating one or more goods or services* with one or more of the  
6               nodes; and
- 7               • traversing one or more of the multiple nodes to *discover a good or*  
8               *service*

9       Lampert does not disclose or suggest a node that can define a logical entity.  
10       All of Lampert's nodes appear to be associated with a physical entity. This is  
11       especially true given the fact that Lampert is concerned with geographical data.  
12       Further, neither of the references disclose associating any goods or services with  
13       one or more nodes. In making out the rejection, the Office argues, with respect to  
14       Papierniak, that it discloses "shopping for purchasing goods and services", and  
15       that based on this, it would be obvious to combine the teachings of both references  
16       to render the subject matter of claim 54 obvious. This teaching and the Office's  
17       rejection falls far short of establishing a prima facie case of obviousness.  
18       Accordingly, for at least this reason, claim 54 is allowable.

19       **Claims 55-56** depend from claim 54 and are allowable as depending from  
20       an allowable base claim. These claims are also allowable for their own recited  
21       features which, in combination with those recited in claim 54, are neither disclosed  
22       nor suggested in the references of record, either singly or in combination with one  
23       another.

24       **Claim 57** is a computer-readable medium claim and is of comparable scope  
25       to claim 54. Hence, for all of the reasons set forth with respect to claim 54 being  
allowable, this claim is allowable.

1       **Claim 58** recites a method of building context-aware data structures and  
2 recites acts comprising receiving input from a source that specifies information  
3 pertaining to physical and/or *logical entities* and processing the information to  
4 define a hierarchical tree structure having a context, the tree structure comprising  
5 multiple nodes each of which represent a separate physical or *logical entity*. As  
6 noted above, Lampert neither discloses nor suggests a method that pertains to  
7 logical entities as that term is contemplated in this claim. In addition, the claim  
8 recites linking at least one of the multiple nodes to a node of another tree structure  
9 having a context and multiple nodes that represent physical and/or logical entities,  
10 *individual nodes having unique IDs that can serve as a basis by which attributes*  
11 *can be assigned to goods or services*. As noted above, none of the references  
12 cited by the Office disclose or suggest nodes with IDs that can serve as a basis by  
13 which attributes can be assigned to goods or services. Accordingly, this claim is  
14 allowable.

15       **Claims 59-60** depend from claim 58 and are allowable as depending from  
16 an allowable base claim. These claims are also allowable for their own recited  
17 features which, in combination with those recited in claim 58, are neither disclosed  
18 nor suggested in the references of record, either singly or in combination with one  
19 another.

## 20 21       **Conclusion**

22       All of the claims are in condition for allowance. Applicant respectfully  
23 requests a Notice of Allowability be issued forthwith. If the Office's next  
24 anticipated action is to be anything other than issuance of a Notice of Allowability,  
25

1 Applicant respectfully requests a telephone call for the purpose of scheduling an  
2 interview.  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25



**Version of the Claims as Amended with Markups**

1  
2  
3 1. (Amended) A system for determining context comprising:  
4 one or more computer-readable media; and  
5 a hierarchical tree structure resident on the media and comprising multiple  
6 nodes each of which represent geographical divisions of the Earth, individual  
7 nodes comprising an entity identification (EID) that is unique to the node, EIDs  
8 serving as a basis by which attributes can be assigned goods or services associated  
9 with an individual node.  
10

11  
12 10. (Amended) The system of claim [9] 1, wherein the nodes comprise a  
13 plurality of node attributes and wherein one of the attributes comprises a name  
14 attribute.  
15

16 11. (Amended) The system of claim [9] 1, wherein the nodes comprise a  
17 plurality of node attributes and wherein one of the attributes comprises a neutral  
18 ground truth name attribute.  
19

20  
21 12. (Amended) The system of claim [9] 1, wherein the nodes comprise a  
22 plurality of node attributes and wherein one of the attributes comprises a  
23 geographic attribute.  
24  
25

13. (Amended) The system of claim [9] 1, wherein the nodes comprise a plurality of node attributes and wherein one of the attributes comprises a latitude/longitude attribute.

14. (Amended) The system of claim [9] 1, wherein the nodes comprise a plurality of node attributes and wherein one of the attributes comprises a relative importance index.

15. (Amended) The system of claim [9] 1, wherein the nodes comprise a plurality of node attributes and wherein one of the attributes comprises a contextual parent attribute.

16. (Amended) The system of claim [9] 1, wherein the nodes comprise a plurality of node attributes and wherein one of the attributes comprises a source attribute.

17. (Amended) The system of claim [9] 1, wherein the nodes comprise a plurality of node attributes and wherein one of the attributes comprises a start/end dates attribute.

1           18.    (Amended) The system of claim [9] 1, wherein the nodes comprise a  
2 plurality of node attributes and wherein one of the attributes comprises a  
3 modification date attribute.

4  
5           19.    (Amended) The system of claim [9] 1, wherein the nodes comprise a  
6 plurality of node attributes and wherein one of the attributes comprises a status  
7 attribute.

8  
9  
10          24.    (Amended) A system for determining context comprising:  
11 one or more computer-readable media;  
12 a first hierarchical tree structure having multiple nodes associated with a  
13 first context;  
14 at least one second hierarchical tree structure having multiple nodes  
15 associated with a second context; and  
16 at least one node from the at least one second hierarchical tree structure  
17 being linked with one node on the first hierarchical tree structure by a link that is  
18 configured to enable a complete context to be derived from the first and second  
19 contexts, individual nodes having unique IDs that can serve as a basis by which  
20 attributes can be assigned to goods or services.  
21  
22  
23  
24  
25

1           28.    (Amended) The system of claim 24, wherein the first and the at least  
2 one second hierarchical tree structures comprise a plurality of attributes, [two] one  
3 of which comprising[:

4               an identification that is unique to a node; and]

5               information that pertains to the tree with which the node is associated.  
6

7           37.    (Amended) A computer-implemented method of determining  
8 context comprising:  
9

10           accessing first and one or more second hierarchical tree structures that are  
11 resident on one or more computer-readable media, each tree structure having  
12 multiple nodes, the nodes of the first hierarchical tree structure being associated  
13 with a first context, the nodes of the one or more second hierarchical tree  
14 structures being associated with a second context; and

15           traversing multiple nodes of at least one of the tree structures to derive a  
16 context, individual nodes having unique IDs that can serve as a basis by which  
17 attributes can be assigned to goods or services.  
18

19  
20           48.    (Amended) One or more computer-readable media having computer-  
21 readable instructions thereon which, when executed by a computing device, cause  
22 the computing device to:

23           access first and second hierarchical tree structures, each tree structure  
24 having multiple nodes, the nodes of the first hierarchical tree structure being  
25

1 associated with a first location context, the nodes of the second hierarchical tree  
2 structure being associated with a second location context, at least one node of the  
3 second hierarchical tree structure being linked with a node of the first hierarchical  
4 tree structure; and

5       traverse at least one node of each tree structure to derive a location context,  
6 at least one node in a traversal path that leads to a root node of the second  
7 hierarchical tree structure being linked with a node of the first hierarchical tree  
8 structure, individual nodes having unique IDs that can serve as a basis by which  
9 attributes can be assigned to goods or services.  
10

11  
12       **58.** (Amended) A computer-implemented method of building context-  
13 aware data structures comprising:

14       receiving input from a source that specifies information pertaining to  
15 physical and/or logical entities;

16       processing the information to define a hierarchical tree structure having a  
17 context, the tree structure comprising multiple nodes each of which represent a  
18 separate physical or logical entity;

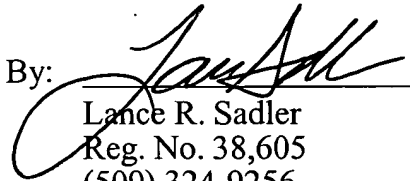
19       linking at least one of the multiple nodes to a node of another tree structure  
20 having a context and multiple nodes that represent physical and/or logical entities,  
21 individual nodes having unique IDs that can serve as a basis by which attributes  
22 can be assigned to goods or services,  
23  
24  
25

1 the tree structures being configured for traversal in a manner that enables  
2 context to be derived from one or more of the nodes.  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

Respectfully Submitted,

Dated: 10/10/02

By:   
Lance R. Sadler  
Reg. No. 38,605  
(509) 324-9256